

# **The Status of Energy Efficiency Programs in Iowa**

**and**

## **The 2007 Iowa Residential Energy Survey**

**Report to the Iowa General Assembly  
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**IOWA UTILITIES BOARD**

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## EXECUTIVE SUMMARY

During the 2007 Legislative Session, the Iowa General Assembly passed HF 918, which directed the Iowa Utilities Board (IUB) to conduct two studies: (1) a study to determine the status and effectiveness of all gas and electric utilities' energy efficiency plans and programs and (2) a survey of consumer knowledge of energy use and energy efficiency.

### **1. Report on the Status of Energy Efficiency Programs in Iowa**

On June 19, 2007, the Board initiated a formal inquiry that directed all utilities in Iowa to provide information on their energy efficiency programs and results for calendar year 2006. Following are key findings from the utility reporting:

#### **Investor-Owned Utilities - Alliant, Aquila, Atmos Energy, and MidAmerican**

- Investor-owned utilities (IOUs) provide 75 percent of electricity sold in Iowa.
- IOUs report substantially increased energy savings over the past six years, with the most notable improvements in 2004 through 2006.
- In 2006 investor-owned utilities achieved new or incremental savings of 0.8 percent of retail electricity and natural gas sales. Electric efficiency and load management programs have also achieved savings of peak electric use equivalent to 1,000 megawatts of peaking plant capacity.
- In 2006 IOUs achieved cumulative or ongoing savings of 5.9 percent of retail sales.
- In 2006 investor-owned utilities spent 3.36 percent of electric revenues and 2.80 percent of gas revenues on energy efficiency.
- By statute, cost effectiveness is the overriding goal of energy efficiency programs. The investor-owned utilities achieved a benefit/cost ratio of 2.13, which means that more than \$2 of benefits are received for every \$1 spent on energy efficiency.
- Compared with a comprehensive national-level study of energy efficiency best practices, Iowa IOU plans and programs address all 16 of the recommended program areas; one or two areas are being developed via test projects, but many have been in effect for as long as ten years.
- There is no reliable national data on energy efficiency savings results, which prevents quantitative benchmarking of Iowa energy efficiency results against other states. This is why most rankings are based on spending rather than results.
- Iowa's investor-owned utilities ranked among the top ten states for planned per capita spending for energy efficiency, according to the Consortium for Energy Efficiency
  - Energy efficiency and load management (#1)
  - Electric energy efficiency (#9)
  - Natural gas energy efficiency (#2)
  - Load management (#1)

**Municipal Electric Utilities (136 utilities)**

- Municipal utilities provide 12.5 percent of total electricity sold in Iowa.
- In 2006 municipal electric utilities achieved new or incremental savings of .15 percent of retail electricity sales.
- In 2006 municipal electric utilities spent 1.0 percent of electric revenues on energy efficiency.

**Municipal Natural Gas Utilities (48 utilities)**

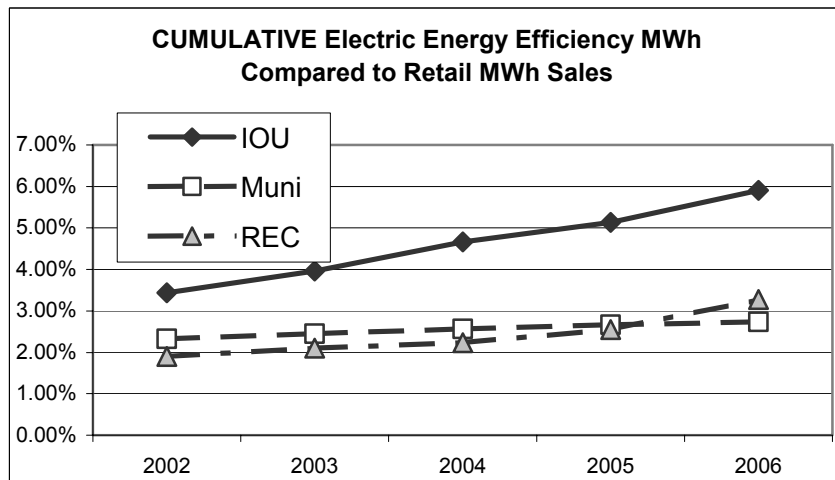
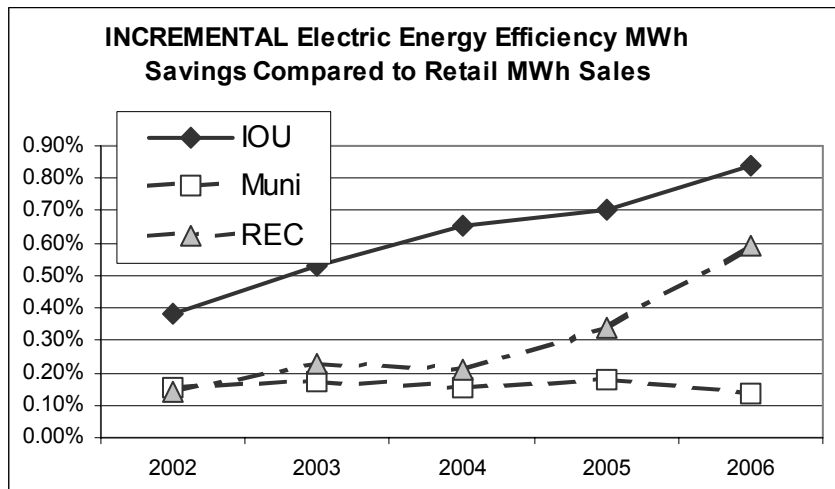
- In 2006 municipal natural gas utilities achieved new or incremental savings of 0.18 percent of retail sales.
- In 2006 municipal natural gas utilities spent 0.3 percent of natural gas revenues on energy efficiency.

**Rural Electric Cooperatives (45 utilities)**

- Rural electric cooperatives provide 11.7 percent of total electricity sold in Iowa.
- In 2006 electric cooperatives achieved new or incremental savings of about 0.6 percent of retail sales.
- In 2006 electric cooperatives achieved cumulative or ongoing savings of 3.47 percent of retail sales.
- In 2006 electric cooperatives spent 2.7 percent of revenues on energy efficiency.
- Rural electric cooperatives have tripled energy savings from their energy efficiency programs between 2004 and 2006.

**General Conclusion**

**Investor-owned utilities have achieved better results than the electric cooperatives and municipals, in terms of both incremental electrical and natural gas energy savings and cumulative energy savings. The IUB has required the investor-owned utilities to spend more on energy efficiency and they have achieved more. For every dollar they spend, they receive over \$2 of energy benefits.**



## 2. Report on the 2007 Iowa Residential Energy Survey

The IUB worked with the Iowa Energy Center and the Center for Social and Behavioral Research at the University of Northern Iowa to develop and conduct the survey. Conclusions:

- Respondents view global climate change as a serious issue and believe strong action is needed to combat the changes.
- Knowledge about energy efficiency and conservation is moderate but generally accurate.
- Television and print media are viewed as the most effective communication sources for energy information.
- Utility providers are viewed as the most credible source of energy information.
- Attitudes and behaviors vary across subgroups. Additional efforts may be needed to increase environmental attitudes and behaviors among males, those with lower educational attainment, and those with lower household incomes.

### **3. Recommendations and Action Items**

Based on the Report on the Status of Energy Efficiency Programs in Iowa in 2006 and the 2007 Iowa Residential Energy Survey, the Iowa Utilities Board is recommending the following actions, some of which may require new statutory authority:

- A. The IUB recommends that the Legislature establish goals for energy efficiency performance that apply to all Iowa energy utilities and extend to all Iowa utilities the requirement to comply with the same IUB approval process for energy efficiency plans that has been effective with the investor-owned utilities, modified (if necessary) to reflect unique features of various utilities.
- B. The IUB will direct investor-owned utilities to analyze the feasibility and effects of increasing energy savings from 0.8 percent in 2006 to 1.5 percent of annual utility retail energy sales by 2012, as suggested by the 2007 Energy Efficiency Study Committee. The investor-owned utilities will include this information in their energy efficiency plans that will be filed this spring.
- C. The IUB will require IOUs to estimate in their energy efficiency plans the effects of potential carbon dioxide emission standards on future avoided costs, which are used to determine the cost-effectiveness of IOU energy efficiency programs and plans.
- D. The IUB will work with all utilities to research and consider implementing shared energy efficiency programs to achieve economies of scale and broader availability.
- E. The IUB will work with all Iowa utilities to research and consider implementing a statewide energy education and marketing program. The 2007 Iowa Residential Energy Survey indicates that Iowans' knowledge of energy efficiency and energy efficient measures is moderate. It also found that Iowans view their utility as the best source of energy information on these issues.
- F. The IUB will research the feasibility of increased funding for low-income weatherization in both rate-regulated and nonrate-regulated utilities' energy efficiency plans.
- G. The IUB will work with stakeholders to research and consider the feasibility of funding for energy efficiency through loan guarantees, grants to secure loans, or other sources of capital. The 2007 Iowa Residential Energy Survey found that almost a quarter of respondents had completed a home energy audit. Home insulation was offered most frequently as the change that was recommended but not made and cost was most frequently mentioned as the reason that audit recommendations were not followed.